Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-20-01** **Date: 26/01/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 20-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/01/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	26/01/2023	150.91 X 149.04 X 150.17	22491	8.288	419.8	18.7	18.8
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	26/01/2023	149.15 X 149.74 X 149.79	22333	8.601	423.3	19.0	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	26/01/2023	149.07 X 150.62 X 149.07	22454	8.418	423.2	18.8	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-20-01** **Date: 16/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 20-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 16/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	16/02/2023	149.40 X 149.38 X 151.19	22316	8.518	530.9	23.8	23.2
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	16/02/2023	149.76 X 150.97 X 150.97	22609	8.848	497.6	22.0	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	19/01/2023	16/02/2023	151.62 X 150.69 X 150.36	22848	8.717	542.9	23.8	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
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****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-23-01** **Date: 28/01/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 23-01-23

Customer ID : Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 28/01/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	151.42 X 150.42 X 150.70	22776	8.854	426.7	18.7	18.4
2	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	150.96 X 150.76 X 151.67	22759	8.417	417.9	18.4	
3	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	150.57 X 149.02 X 150.70	22437	8.304	408.2	18.2	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-23-01** **Date: 20/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 23-01-23

Customer ID : Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 18/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	150.31 X 150.14 X 150.18	22568	8.476	525.9	23.3	22.9
2	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	150.32 X 150.73 X 149.34	22656	8.640	507.1	22.4	
3	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	150.36 X 150.51 X 149.28	22630	8.616	523.4	23.1	

* The results obtained are satisfactory as per standard requirements.

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****End of Report****

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-23-01** **Date: 28/01/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 23-01-23

Customer ID : Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 28/01/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	151.85 X 149.18 X 149.52	22652	8.406	418.4	19.0	18.8
2	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	149.59 X 149.38 X 150.65	22347	8.816	403.7	18.8	
3	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	28/01/2023	149.13 X 149.58 X 149.82	22306	8.837	410.6	18.7	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-23-01** **Date: 20/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 23-01-23

Customer ID : Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 18/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	149.94 X 151.78 X 150.34	22757	8.270	531.9	23.4	23.0
2	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	151.27 X 149.30 X 151.55	22584	8.501	501.2	22.2	
3	Drain Side Wall Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross LHS	M20	21/01/2023	18/02/2023	150.93 X 151.71 X 150.57	22899	8.133	539.2	23.5	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 01/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 01/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	149.47 X 150.26 X 149.08	22459	8.324	412.8	18.4	18.7
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	149.82 X 151.76 X 149.64	22737	8.669	426.3	18.8	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	151.89 X 150.34 X 150.90	22835	8.994	431.2	18.9	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 22/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 22/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	150.18 X 149.91 X 151.59	22513	8.872	534.7	23.8	23.1
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	149.87 X 151.54 X 149.20	22711	8.650	502.5	22.1	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	151.26 X 149.37 X 151.68	22594	8.498	529.9	23.5	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 01/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 01/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	151.60 X 149.83 X 150.40	22714	8.370	411.3	18.1	18.5
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	151.54 X 149.68 X 151.88	22682	8.222	429.8	18.9	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	01/02/2023	149.27 X 149.07 X 150.23	22252	8.363	409.4	18.4	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
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****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 22/02/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-01-23

Customer ID : Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 22/02/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	151.76 X 150.55 X 149.43	22847	8.804	530.1	23.8	23.3
2	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	150.73 X 150.07 X 151.18	22621	8.932	509.8	22.4	
3	Drain Bottom Raft Concrete - Vidyaranypura, BEL Road 2nd Block, 2nd Cross RHS	M20	25/01/2023	22/02/2023	151.05 X 150.73 X 149.40	22768	8.703	529.0	23.9	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 02/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 02/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.77 X 150.29 X 150.25	22659	8.700	487.8	22.0	21.7
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.45 X 150.65 X 150.75	22665	8.865	490.4	21.9	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.85 X 150.04 X 150.24	22633	8.572	496.2	21.1	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 23/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.88 X 150.01 X 150.13	22634	8.930	784.6	34.2	34.6
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.14 X 150.68 X 150.74	22623	8.626	779.9	34.8	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.60 X 150.22 X 150.12	22623	8.666	779.3	34.9	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R.KARTHIK RECHAN
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Quality Manager

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****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 02/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 02/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.12 X 150.24 X 150.81	22553	8.703	489.0	22.0	21.6
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.34 X 150.97 X 150.14	22697	8.449	484.3	21.3	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.91 X 150.39 X 150.95	22696	8.574	479.8	21.6	

* The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 23/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.48 X 150.66 X 150.72	22671	8.854	783.5	34.2	34.5
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.66 X 150.46 X 150.67	22669	8.479	789.8	34.9	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.13 X 150.45 X 150.54	22588	8.237	783.5	34.4	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 02/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 02/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.04 X 150.84 X 150.05	22632	8.220	495.6	21.6	21.6
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.44 X 150.05 X 150.84	22574	8.833	481.4	21.6	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	02/06/2023	150.75 X 150.77 X 150.53	22728	8.898	494.4	21.7	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-01-27-01** **Date: 23/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 27-05-23

Customer ID : Cement Concrete Pavement - RC Pura Road- Munikempanna Layout

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.25 X 150.05 X 150.66	22545	8.328	788.2	34.5	34.6
2	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.22 X 150.26 X 150.62	22572	8.665	768.5	34.7	
3	Cement Concrete Pavement - RC Pura Road- Munikempanna Layout	M30	26/05/2023	23/06/2023	150.44 X 150.97 X 150.81	22713	8.802	781.0	34.7	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 03/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.93 X 150.75 X 150.52	22753	8.450	492.8	21.7	21.7
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.11 X 150.47 X 150.65	22588	8.360	489.0	21.7	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.15 X 150.68 X 150.62	22624	8.259	495.7	21.9	

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 24/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.92 X 150.52 X 150.04	22716	8.771	774.7	34.5	34.5
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.69 X 150.24 X 150.94	22639	8.546	787.1	34.4	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.48 X 150.18 X 150.70	22598	8.329	776.4	34.4	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 03/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.33 X 150.05 X 151.00	22557	8.805	475.6	21.6	21.6
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.11 X 150.74 X 150.72	22628	8.120	479.8	21.3	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.54 X 150.81 X 150.72	22702	8.469	481.2	21.9	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 24/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.23 X 150.99 X 150.98	22684	8.256	780.0	34.5	34.5
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.98 X 150.12 X 150.86	22665	8.644	778.1	34.5	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.62 X 150.53 X 150.47	22673	8.180	774.7	34.7	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 03/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.01 X 150.41 X 150.35	22563	8.261	490.4	21.1	21.2
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.97 X 150.68 X 150.18	22749	8.128	498.7	21.6	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.50 X 150.04 X 150.88	22580	8.582	485.3	21.1	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 24/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.86 X 150.81 X 150.74	22751	8.988	777.4	34.5	34.5
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.85 X 150.79 X 150.24	22747	8.238	778.2	34.7	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.45 X 150.16 X 150.80	22592	8.511	789.2	34.2	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 03/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.36 X 150.96 X 150.84	22698	8.792	483.6	21.7	21.6
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.99 X 150.19 X 150.05	22677	8.668	492.1	21.2	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	03/06/2023	150.52 X 150.04 X 150.20	22583	8.815	482.3	22.0	

* The results obtained are satisfactory as per standard requirements.

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CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-29-01** **Date: 24/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 29-05-23

Customer ID : Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.77 X 150.67 X 150.91	22717	8.805	792.0	34.9	34.6
2	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.85 X 150.99 X 150.35	22778	8.360	785.1	34.4	
3	Cement Concrete Pavement - Patil Gopalappa Layout, 7th Cross Road	M30	27/05/2023	24/06/2023	150.74 X 150.22 X 150.87	22645	8.405	775.9	34.4	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 05/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.45 X 150.99 X 150.41	22716	8.581	487.5	21.1	21.3
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.27 X 150.64 X 150.74	22637	8.457	483.8	21.7	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.03 X 150.26 X 150.17	22543	8.612	485.2	21.1	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 26/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.75 X 150.74 X 150.75	22723	8.512	779.4	34.7	34.5
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.29 X 150.78 X 150.14	22661	8.699	772.6	34.4	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.44 X 150.35 X 150.16	22618	8.673	787.2	34.2	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 05/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.50 X 150.27 X 150.37	22616	8.558	494.1	21.5	21.5
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.86 X 150.40 X 150.32	22690	8.694	495.0	21.4	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.72 X 150.84 X 150.14	22735	8.826	490.4	21.5	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 26/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.10 X 150.99 X 150.61	22663	8.428	790.7	34.9	34.5
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.84 X 150.27 X 150.30	22666	8.114	772.8	34.4	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.83 X 150.67 X 150.69	22724	8.745	782.7	34.3	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 05/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.06 X 150.79 X 150.10	22627	8.776	496.9	21.7	21.9
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.73 X 150.79 X 150.11	22728	8.949	498.4	22.0	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.30 X 150.20 X 150.96	22574	8.563	494.6	22.0	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 26/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.02 X 150.16 X 150.31	22526	8.106	778.3	34.6	34.5
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.80 X 150.14 X 150.52	22641	8.452	770.7	34.1	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.58 X 150.87 X 150.54	22718	8.268	787.0	34.6	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 05/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.49 X 150.15 X 150.88	22595	8.287	485.3	21.2	21.2
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.01 X 150.98 X 150.97	22649	8.451	494.9	21.1	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	05/06/2023	150.26 X 150.24 X 150.16	22575	8.822	485.7	21.1	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2023-05-31-01** **Date: 26/06/2023**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer's Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 31-05-23

Customer ID : Cement Concrete Pavement - Yalagamma Layout, 6th C Cross

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M30 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/06/2023

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.30 X 150.33 X 150.38	22595	8.246	790.5	34.4	34.6
2	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.36 X 150.31 X 150.24	22600	8.288	775.6	35.0	
3	Cement Concrete Pavement - Yalagamma Layout, 6th C Cross	M30	29/05/2023	26/06/2023	150.90 X 150.71 X 150.43	22741	8.576	791.7	34.4	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2023-04-01-01** **Date: 03-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : WMM (Wet Mix Macadam)

Source of Sample : Ramanna garden

Date of test : 01-04-23

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	221	221	2.0	98.0	95-100
22.4	2475	2696	24.5	75.5	60-80
11.2	2345	5041	45.8	54.2	40-60
4.75	2013	7054	64.1	35.9	25-40
2.36	1147	8201	74.6	25.4	15-30
0.6	1065	9266	84.2	15.8	8-22
0.075	1268	10534	95.8	4.2	0-5

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Ramanna garden	
Date of test	:	01-04-23	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	302.5	302.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	77.5	74.6
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	224.8	227.5
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.2	0.4
5	Aggregate impact value	(B/A)*100	25.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	25.1	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Ramanna garden	
Date of test	:	01-04-23	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.3%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.7%	
Combined Flakiness and Elongation Index for WMM	25.0%	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	WMM (Wet Mix Macadam)	
Source of Sample	:	Bloom Moon Garden	
Date of test	:	01-04-23	
Oven Dry Weight	:	11000 Grams	

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	258	258	2.3	97.7	95-100
22.4	2398	2656	24.1	75.9	60-80
11.2	2178	4834	43.9	56.1	40-60
4.75	2248	7082	64.4	35.6	25-40
2.36	1285	8367	76.1	23.9	15-30
0.6	1265	9632	87.6	12.4	8-22
0.075	958	10590	96.3	3.7	0-5

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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End of Report

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Bloom Moon Garden	
Date of test	:	01-04-23	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	301.5	301.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	76.1	73.4
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	224.8	227.5
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.6	0.6
5	Aggregate impact value	(B/A)*100	25.2	24.3
6	Aggregate impact value (Mean of two tests)	Pecentage	24.8	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Bloom Moon Garden	
Date of test	:	01-04-23	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.1%	
Combined Flakiness and Elongation Index for WMM	24.9%	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

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End of Report

TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2023-04-03-01**	**Date: 05-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	03-04-23	
Type of Mix	:	WMM (Wet Mix Macadam)	
Source of Sample	:	Bloom Field Garden	
Date of test	:	03-04-23	
Oven Dry Weight	:	11000	Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	302	302	2.7	97.3	95-100
22.4	2475	2777	25.2	74.8	60-80
11.2	2745	5522	50.2	49.8	40-60
4.75	2145	7667	69.7	30.3	25-40
2.36	1258	8925	81.1	18.9	15-30
0.6	987	9912	90.1	9.9	8-22
0.075	898	10810	98.3	1.7	0-5

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

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End of Report

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-04-03-01** **Date: 05-04-23**
Project Name	:	Package No-03 (Consists of 5 works)
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23
Date of Receipt	:	03-04-23
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Source of Sample	:	Bloom Field Garden
Date of test	:	03-04-23

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	301.5	301.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	76.2	73.8
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	224.8	227.5
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.5	0.2
5	Aggregate impact value	(B/A)*100	25.3	24.5
6	Aggregate impact value (Mean of two tests)	Pecentage	24.9	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-04-03-01**	**Date: 05-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	03-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Bloom Field Garden	
Date of test	:	03-04-23	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	11.9%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.3%	
Combined Flakiness and Elongation Index for WMM	24.2%	

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2023-04-04-01** **Date: 06-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 04-04-23

Type of Mix : WMM (Wet Mix Macadam)

Source of Sample : BEL Layout

Date of test : 04-04-23

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	201	201	1.8	98.2	95-100
22.4	2399	2600	23.6	76.4	60-80
11.2	2185	4785	43.5	56.5	40-60
4.75	1988	6773	61.6	38.4	25-40
2.36	1658	8431	76.6	23.4	15-30
0.6	1495	9926	90.2	9.8	8-22
0.075	745	10671	97.0	3.0	0-5

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-04-04-01**	**Date: 06-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	04-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	BEL Layout	
Date of test	:	04-04-23	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	302.2	302.9
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	77.3	74.8
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	224.8	227.5
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.1	0.6
5	Aggregate impact value	(B/A)*100	25.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	25.1	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-04-04-01**	**Date: 06-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	04-04-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	BEL Layout	
Date of test	:	04-04-23	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	11.6%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.6%	
Combined Flakiness and Elongation Index for WMM	24.2%	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 03-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer's Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Sample Type	:	Bitumen	
Reference to BIS codes	:	IS: 1201-2021, IS: 1202-1220(1978) (Reaffirmed-2019)	
Date of test	:	01-04-23	

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**61**	Min 45
2	Softening Point, °C	**50.8**	Min. 47°C
3	Ductility, cm	**100**	Min. 47 cm
4	Flash point, °C	**310**	Min. 220°C
	Fire point, °C	**322**	

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2023-04-01-01** **Date: 03-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : DBM-Plant (Dense Bituminous Macadam)

Date of test : 01-04-23

Weight of Sample : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10 (grading -2)
37.5	0	0	0	100	100
26.5	250	250	5.00	95.00	90-100
19	350	600	12.00	88.00	71-95
13.2	450	1050	21.00	79.00	56-80
4.75	1750	2800	56.00	44.00	38-54
2.36	400	3200	64.00	36.00	28-42
0.3	1350	4550	91.00	9.00	7-21
0.075	250	4800	96.00	4.00	2-8
PAN	200	5000	0.00	0	0

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 04-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of test	:	01-04-23	

Table 500-6 : Physical Requirements fo Coarse Aggregate for Dense Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	13.0	Combined Flakiness & Elongation Index for DBM is Maximum 35%	IS:2386 Part I
	Elongation Index	10.0		
Strength	Aggregate Impact Value	18.0	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.58	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.38	Maximum 2%	IS:2386 Part III

The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : **CP-RW-2023-04-01-01** **Date: 04-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : DBM (Dense Bituminous Mecadam)

Date of test : 01-04-23

The results of the tests conducted on the Dense Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 04-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	DBM(Dense Bitumnous Macadam)	
Date of test	:	01-04-23	

Type of Binder	:	60/70
% of Binder Used	:	4.5%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	9 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-RW-2023-04-01-01** **Date: 03-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : BC-Plant (Bituminous Concrete)

Date of test : 01-04-23

Oven Dry Weight : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : **CP-RW-2023-04-01-01** **Date: 05-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : BC (Bituminous Concrete)

Date of test : 01-04-23

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-04-01-01**	**Date: 05-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	01-04-23	
Type of Mix	:	BC(Bitumenous Concrete)	
Date of test	:	01-04-23	

Type of Binder	:	60/70
% of Binder Used	:	5.4%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.8 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : **CP-RW-2023-04-01-01** **Date: 05-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 01-04-23

Type of Mix : BC (Bituminous Concrete)

Date of test : 01-04-23

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-10-01**	**Date: 11-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	10-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Ramanna Garden 1st main	
Date of test	:	10-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479	479.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.6	4.50
7	Average percentage	%	4.55	

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Lab ID : CP-RW-2023-04-10-01 Date: 11-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0	100.0	100
26.5	14	14.4	3.01	97.0	90-100
19	24	38.4	8.02	92.0	71-95
13.2	120	158.4	33.07	66.9	56-80
4.75	96	254.4	53.11	46.9	38-54
2.36	80	334.4	69.81	30.2	28-42
0.3	62	396.8	82.84	17.2	7-21
0.075	53	449.6	93.86	6.1	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification Table 500-10(grading -2)
37.5	0	0	0	100.0	100
26.5	15	14.8	3.09	96.9	90-100
19	24	38.8	8.09	91.9	71-95
13.2	120	158.8	33.12	66.9	56-80
4.75	96	254.8	53.14	46.9	38-54
2.36	78	332.8	69.41	30.6	28-42
0.3	62	395.2	82.42	17.6	7-21
0.075	53	448	93.43	6.6	2-8

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-11-01**	**Date: 12-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	11-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Bloom Moon Garden	
Date of test	:	11-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.50	4.50
7	Average percentage	%	4.50	

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Lab ID : **CP-RW-2023-04-11-01** **Date: 12-04-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	32	32	6.67	93.3	90-100
19	46	78	16.27	83.7	71-95
13.2	116	194	40.46	59.5	56-80
4.75	76	270	56.31	43.7	38-54
2.36	38	308	64.23	35.8	28-42
0.3	76	384	80.08	19.9	7-21
0.075	59	443	92.39	7.6	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	26	26	5.42	94.6	90-100
19	32	58	12.10	87.9	71-95
13.2	145	203	42.34	57.7	56-80
4.75	78	281	58.60	41.4	38-54
2.36	32	313	65.28	34.7	28-42
0.3	69	382	79.67	20.3	7-21
0.075	71	453	94.47	5.5	2-8

* The results obtained are satisfactory as per standard requirements.

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FOR CIVIL Pro.
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Quality Manager

AEE (VRP) SD

End of Report

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-12-01**	**Date: 13-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	12-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Bloom Filed garden main road	
Date of test	:	12-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	478.5	479.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.70	4.50
7	Average percentage	%	4.60	

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Lab ID : CP-RW-2023-04-12-01 Date: 13-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 478.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	33	33	6.90	93.1	90-100
19	45	78	16.30	83.7	71-95
13.2	112	190	39.71	60.3	56-80
4.75	79	269	56.22	43.8	38-54
2.36	40	309	64.58	35.4	28-42
0.3	73	382	79.83	20.2	7-21
0.075	63	445	93.00	7.0	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	28	28	5.84	94.2	90-100
19	34	62	12.93	87.1	71-95
13.2	148	210	43.80	56.2	56-80
4.75	80	290	60.48	39.5	38-54
2.36	35	325	67.78	32.2	28-42
0.3	70	395	82.38	17.6	7-21
0.075	66	461	96.14	3.9	2-8

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-17-01**	**Date: 18-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	17-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Najappa layout 8th A Cross Road	
Date of test	:	17-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.50	4.60
7	Average percentage	%	4.55	

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Lab ID : CP-RW-2023-04-17-01 Date: 18-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	36	36	7.51	92.5	90-100
19	40	76	15.85	84.2	71-95
13.2	108	184	38.37	61.6	56-80
4.75	77	261	54.43	45.6	38-54
2.36	42	303	63.19	36.8	28-42
0.3	80	383	79.87	20.1	7-21
0.075	60	443	92.39	7.6	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	30	30	6.26	93.7	90-100
19	36	66	13.78	86.2	71-95
13.2	130	196	40.92	59.1	56-80
4.75	82	278	58.04	42.0	38-54
2.36	37	315	65.76	34.2	28-42
0.3	73	388	81.00	19.0	7-21
0.075	63	451	94.15	5.8	2-8

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-18-01**	**Date: 19-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	18-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Nanjappa layout 6th Cross	
Date of test	:	18-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	478.5	478
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.70	4.80
7	Average percentage	%	4.75	

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Lab ID : **CP-RW-2023-04-18-01** **Date: 19-04-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 478.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	34	34	7.11	92.9	90-100
19	41	75	15.67	84.3	71-95
13.2	109	184	38.45	61.5	56-80
4.75	79	263	54.96	45.0	38-54
2.36	44	307	64.16	35.8	28-42
0.3	83	390	81.50	18.5	7-21
0.075	58	448	93.63	6.4	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 478

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	31	31	6.49	93.5	90-100
19	42	73	15.27	84.7	71-95
13.2	120	193	40.38	59.6	56-80
4.75	86	279	58.37	41.6	38-54
2.36	31	310	64.85	35.1	28-42
0.3	70	380	79.50	20.5	7-21
0.075	72	452	94.56	5.4	2-8

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-19-01**	**Date: 20-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	19-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	BEL layout, 2nd Cross	
Date of test	:	19-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.50	4.60
7	Average percentage	%	4.55	

CIVIL Pro Sig..... Date..... BANGALORE

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Lab ID : CP-RW-2023-04-19-01 Date: 20-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	29	29	6.05	94.0	90-100
19	47	76	15.85	84.2	71-95
13.2	113	189	39.42	60.6	56-80
4.75	83	272	56.73	43.3	38-54
2.36	49	321	66.94	33.1	28-42
0.3	86	407	84.88	15.1	7-21
0.075	60	467	97.39	2.6	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	27	27	5.64	94.4	90-100
19	48	75	15.66	84.3	71-95
13.2	126	201	41.96	58.0	56-80
4.75	89	290	60.54	39.5	38-54
2.36	36	326	68.06	31.9	28-42
0.3	72	398	83.09	16.9	7-21
0.075	65	463	96.66	3.3	2-8

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-04-20-01**	**Date: 21-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	20-04-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	Bloom Moon garden, 1st main road	
Date of test	:	20-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.60	4.60
7	Average percentage	%	4.60	

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Lab ID : CP-RW-2023-04-20-01 Date: 21-04-23

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	33	33	6.89	93.1	90-100
19	49	82	17.12	82.9	71-95
13.2	112	194	40.50	59.5	56-80
4.75	80	274	57.20	42.8	38-54
2.36	47	321	67.01	33.0	28-42
0.3	80	401	83.72	16.3	7-21
0.075	55	456	95.20	4.8	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	34	34	7.10	92.9	90-100
19	53	87	18.16	81.8	71-95
13.2	120	207	43.22	56.8	56-80
4.75	70	277	57.83	42.2	38-54
2.36	40	317	66.18	33.8	28-42
0.3	70	387	80.79	19.2	7-21
0.075	60	447	93.32	6.7	2-8

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-05-20-01**	**Date: 21-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	20-05-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	G.Ramaiah layout 1st Cross	
Date of test	:	20-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	478.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.70	4.60
7	Average percentage	%	4.65	

CIVIL Pro Sig..... Date..... BANGALORE

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Lab ID : **CP-RW-2023-05-20-01** **Date: 21-05-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 478.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	25	25	5.22	94.8	90-100
19	44	69	14.42	85.6	71-95
13.2	101	170	35.53	64.5	56-80
4.75	75	245	51.20	48.8	38-54
2.36	40	285	59.56	40.4	28-42
0.3	95	380	79.41	20.6	7-21
0.075	66	446	93.21	6.8	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	39	39	8.14	91.9	90-100
19	51	90	18.79	81.2	71-95
13.2	100	190	39.67	60.3	56-80
4.75	80	270	56.37	43.6	38-54
2.36	60	330	68.89	31.1	28-42
0.3	80	410	85.59	14.4	7-21
0.075	45	455	94.99	5.0	2-8

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-04-25-01**	**Date: 26-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	25-04-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	Ramanna garden , 2nd main	
Date of test	:	25-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	474.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.60	5.50
7	Average percentage	%	5.55	

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Lab ID : **CP-RW-2023-04-25-01** **Date: 26-04-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	32	32	6.8	93.2	90-100
9.5	45	77	16.2	83.8	70-88
4.75	123	200	42.2	57.8	53-71
2.36	62	262	55.3	44.7	42-58
1.18	38	300	63.3	36.7	34-48
0.6	22	322	67.9	32.1	26-38
0.3	48	370	78.1	21.9	18-28
0.15	38	408	86.1	13.9	12-20
0.075	28	436	92.0	8.0	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	36	36	7.6	92.4	90-100
9.5	49	85	17.9	82.1	70-88
4.75	96	181	38.1	61.9	53-71
2.36	69	250	52.7	47.3	42-58
1.18	53	303	63.9	36.1	34-48
0.6	25	328	69.1	30.9	26-38
0.3	49	377	79.5	20.5	18-28
0.15	20	397	83.7	16.3	12-20
0.075	40	437	92.1	7.9	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-04-25-01** **Date: 26-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 25-04-23

Type of Mix : Tack coat

Date of test : 25-04-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

End of Report

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-04-26-01**	**Date: 27-04-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	26-04-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	Ramanna garden , 3rd Cross Road	
Date of test	:	26-04-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.60	5.40
7	Average percentage	%	5.50	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-04-26-01 Date: 27-04-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	26	26	5.5	94.5	90-100
9.5	57	83	17.5	82.5	70-88
4.75	125	208	43.9	56.1	53-71
2.36	46	254	53.6	46.4	42-58
1.18	43	297	62.7	37.3	34-48
0.6	33	330	69.6	30.4	26-38
0.3	40	370	78.1	21.9	18-28
0.15	31	401	84.6	15.4	12-20
0.075	38	439	92.6	7.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	30	30	6.3	93.7	90-100
9.5	70	100	21.1	78.9	70-88
4.75	116	216	45.5	54.5	53-71
2.36	50	266	56.0	44.0	42-58
1.18	39	305	64.2	35.8	34-48
0.6	32	337	70.9	29.1	26-38
0.3	40	377	79.4	20.6	18-28
0.15	33	410	86.3	13.7	12-20
0.075	34	444	93.5	6.5	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-04-26-01** **Date: 27-04-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 26-04-23

Type of Mix : Tack coat

Date of test : 26-04-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-09-01**	**Date: 11-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	09-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	Bloom Moon garden , 1st main road	
Date of test	:	09-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	475	474.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.40	5.50
7	Average percentage	%	5.45	

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-05-09-01 Date: 11-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	23	23	4.8	95.2	90-100
9.5	59	82	17.3	82.7	70-88
4.75	121	203	42.7	57.3	53-71
2.36	50	253	53.3	46.7	42-58
1.18	49	302	63.6	36.4	34-48
0.6	34	336	70.7	29.3	26-38
0.3	44	380	80.0	20.0	18-28
0.15	29	409	86.1	13.9	12-20
0.075	40	449	94.5	5.5	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	33	33	7.0	93.0	90-100
9.5	74	107	22.6	77.4	70-88
4.75	110	217	45.7	54.3	53-71
2.36	50	267	56.3	43.7	42-58
1.18	40	307	64.7	35.3	34-48
0.6	38	345	72.7	27.3	26-38
0.3	37	382	80.5	19.5	18-28
0.15	30	412	86.8	13.2	12-20
0.075	30	442	93.2	6.8	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
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End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-09-01** **Date: 11-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 09-05-23

Type of Mix : Tack coat

Date of test : 09-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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End of Report

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-11-01**	**Date: 12-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	11-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	4th cross, bloom field garden	
Date of test	:	11-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.60	5.40
7	Average percentage	%	5.50	

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-05-11-01 Date: 12-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	12	12	2.5	97.5	90-100
9.5	52	64	13.5	86.5	70-88
4.75	141	205	43.2	56.8	53-71
2.36	46	251	53.0	47.0	42-58
1.18	39	290	61.2	38.8	34-48
0.6	15	305	64.3	35.7	26-38
0.3	46	351	74.1	25.9	18-28
0.15	45	396	83.5	16.5	12-20
0.075	39	435	91.8	8.2	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.8	99.2	90-100
9.5	62	66	13.9	86.1	70-88
4.75	112	178	37.5	62.5	53-71
2.36	88	266	56.0	44.0	42-58
1.18	29	295	62.1	37.9	34-48
0.6	11	306	64.4	35.6	26-38
0.3	46	352	74.1	25.9	18-28
0.15	45	397	83.6	16.4	12-20
0.075	35	432	90.9	9.1	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-11-01** **Date: 12-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 11-05-23

Type of Mix : Tack coat

Date of test : 11-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
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End of Report

AEE (VRP) SD

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HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
WATER TESTING | GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-16-01**	**Date: 17-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises. No.123. Aishwarya. 3rd Cross. Ramanna Garden. Vidyaranyapura. Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	16-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	4th main, BEL Layout	
Date of test	:	16-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474.5	473.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.50	5.70
7	Average percentage	%	5.60	

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CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
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Lab ID : CP-RW-2023-05-16-01 Date: 17-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	21	21	4.4	95.6	90-100
9.5	47	68	14.3	85.7	70-88
4.75	139	207	43.6	56.4	53-71
2.36	41	248	52.3	47.7	42-58
1.18	34	282	59.4	40.6	34-48
0.6	20	302	63.6	36.4	26-38
0.3	41	343	72.3	27.7	18-28
0.15	40	383	80.7	19.3	12-20
0.075	53	436	91.9	8.1	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 473.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	10	10	2.1	97.9	90-100
9.5	69	79	16.7	83.3	70-88
4.75	116	195	41.2	58.8	53-71
2.36	60	255	53.9	46.1	42-58
1.18	35	290	61.2	38.8	34-48
0.6	16	306	64.6	35.4	26-38
0.3	42	348	73.5	26.5	18-28
0.15	43	391	82.6	17.4	12-20
0.075	45	436	92.1	7.9	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Quality Manager

End of Report

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-16-01** **Date: 17-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 16-05-23

Type of Mix : Tack coat

Date of test : 16-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.804	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.024	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.267	0.256
7	Average	Kg/sq.m	0.261	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-17-01**	**Date: 18-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	17-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	8th A Cross, Nanjappa layout	
Date of test	:	17-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	473	474
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.80	5.60
7	Average percentage	%	5.70	

CIVIL Pro Sig..... Date..... BANGALORE

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Lab ID : CP-RW-2023-05-17-01 Date: 18-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	28	28	5.9	94.1	90-100
9.5	55	83	17.5	82.5	70-88
4.75	124	207	43.8	56.2	53-71
2.36	53	260	55.0	45.0	42-58
1.18	41	301	63.6	36.4	34-48
0.6	37	338	71.5	28.5	26-38
0.3	35	373	78.9	21.1	18-28
0.15	30	403	85.2	14.8	12-20
0.075	46	449	94.9	5.1	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	33	33	7.0	93.0	90-100
9.5	73	106	22.4	77.6	70-88
4.75	105	211	44.5	55.5	53-71
2.36	46	257	54.2	45.8	42-58
1.18	43	300	63.3	36.7	34-48
0.6	41	341	71.9	28.1	26-38
0.3	39	380	80.2	19.8	18-28
0.15	29	409	86.3	13.7	12-20
0.075	34	443	93.5	6.5	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-17-01** **Date: 18-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 17-05-23

Type of Mix : Tack coat

Date of test : 17-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.805	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.025	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.278	0.256
7	Average	Kg/sq.m	0.267	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-18-01**	**Date: 19-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	18-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	7th Cross, Nanjappa layout	
Date of test	:	18-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.60	5.40
7	Average percentage	%	5.50	

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CIVIL Pro Sig..... Date..... BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-05-18-01 Date: 19-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	32	32	6.8	93.2	90-100
9.5	50	82	17.3	82.7	70-88
4.75	128	210	44.3	55.7	53-71
2.36	39	249	52.5	47.5	42-58
1.18	34	283	59.7	40.3	34-48
0.6	25	308	65.0	35.0	26-38
0.3	40	348	73.4	26.6	18-28
0.15	40	388	81.9	18.1	12-20
0.075	52	440	92.8	7.2	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	18	18	3.8	96.2	90-100
9.5	73	91	19.2	80.8	70-88
4.75	110	201	42.3	57.7	53-71
2.36	60	261	54.9	45.1	42-58
1.18	34	295	62.1	37.9	34-48
0.6	28	323	68.0	32.0	26-38
0.3	50	373	78.5	21.5	18-28
0.15	29	402	84.6	15.4	12-20
0.075	40	442	93.1	6.9	4-10

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-18-01** **Date: 19-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 18-05-23

Type of Mix : Tack coat

Date of test : 18-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.805	0.772
5	Weight of tack Coat (d=c-b)	Kg	0.025	0.024
6	Rate of spread of tack coat	Kg/sq.m	0.278	0.267
7	Average	Kg/sq.m	0.272	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2023-05-19-01** **Date: 20-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 19-05-23

Type of Mix : BC (Bituminous Concrete)

Source of Sample : Main Road, Jai Ram layout

Date of test : 19-05-23

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	474.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.60	5.50
7	Average percentage	%	5.55	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : **CP-RW-2023-05-19-01** **Date: 20-05-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	31	31	6.5	93.5	90-100
9.5	53	84	17.7	82.3	70-88
4.75	123	207	43.7	56.3	53-71
2.36	40	247	52.1	47.9	42-58
1.18	38	285	60.1	39.9	34-48
0.6	28	313	66.0	34.0	26-38
0.3	37	350	73.8	26.2	18-28
0.15	39	389	82.1	17.9	12-20
0.075	50	439	92.6	7.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	26	26	5.5	94.5	90-100
9.5	69	95	20.0	80.0	70-88
4.75	113	208	43.8	56.2	53-71
2.36	57	265	55.8	44.2	42-58
1.18	37	302	63.6	36.4	34-48
0.6	30	332	70.0	30.0	26-38
0.3	48	380	80.1	19.9	18-28
0.15	30	410	86.4	13.6	12-20
0.075	34	444	93.6	6.4	4-10

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-19-01** **Date: 20-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 19-05-23

Type of Mix : Tack coat

Date of test : 19-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.805	0.769
5	Weight of tack Coat (d=c-b)	Kg	0.025	0.021
6	Rate of spread of tack coat	Kg/sq.m	0.278	0.233
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
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Quality Manager

End of Report

AEE (VRP) SD

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-23-01**	**Date: 24-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	23-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	6th Cross Road	
Date of test	:	23-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	5.60	5.40
7	Average percentage	%	5.50	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-05-23-01 Date: 24-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	28	28	5.9	94.1	90-100
9.5	57	85	17.9	82.1	70-88
4.75	124	209	44.1	55.9	53-71
2.36	50	259	54.6	45.4	42-58
1.18	46	305	64.3	35.7	34-48
0.6	31	336	70.9	29.1	26-38
0.3	35	371	78.3	21.7	18-28
0.15	33	404	85.2	14.8	12-20
0.075	46	450	94.9	5.1	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	34	34	7.2	92.8	90-100
9.5	78	112	23.6	76.4	70-88
4.75	101	213	44.8	55.2	53-71
2.36	46	259	54.5	45.5	42-58
1.18	32	291	61.3	38.7	34-48
0.6	42	333	70.1	29.9	26-38
0.3	44	377	79.4	20.6	18-28
0.15	36	413	86.9	13.1	12-20
0.075	32	445	93.7	6.3	4-10

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-23-01** **Date: 24-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 23-05-23

Type of Mix : Tack coat

Date of test : 23-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.803	0.769
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.021
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.233
7	Average	Kg/sq.m	0.244	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : CP-RW-2023-05-24-01 **Date: 25-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 24-05-23

Type of Mix : BC (Bituminous Concrete)

Source of Sample : Nanjappa layout 17th cross road

Date of test : 24-05-23

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474.5	475
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.50	5.40
7	Average percentage	%	5.45	

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Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : **CP-RW-2023-05-24-01** **Date: 25-05-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	36	36	7.6	92.4	90-100
9.5	60	96	20.2	79.8	70-88
4.75	118	214	45.1	54.9	53-71
2.36	48	262	55.2	44.8	42-58
1.18	44	306	64.5	35.5	34-48
0.6	32	338	71.2	28.8	26-38
0.3	40	378	79.7	20.3	18-28
0.15	25	403	84.9	15.1	12-20
0.075	46	449	94.6	5.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	38	38	8.0	92.0	90-100
9.5	79	117	24.6	75.4	70-88
4.75	90	207	43.6	56.4	53-71
2.36	41	248	52.2	47.8	42-58
1.18	30	278	58.5	41.5	34-48
0.6	44	322	67.8	32.2	26-38
0.3	46	368	77.5	22.5	18-28
0.15	40	408	85.9	14.1	12-20
0.075	33	441	92.8	7.2	4-10

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-24-01** **Date: 25-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 24-05-23

Type of Mix : Tack coat

Date of test : 24-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.804	0.771
5	Weight of tack Coat (d=c-b)	Kg	0.024	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.267	0.256
7	Average	Kg/sq.m	0.261	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

End of Report

AEE (WRP) SD

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-05-25-01**	**Date: 26-05-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	25-05-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	Nanjappa layout 3rd Cross	
Date of test	:	25-05-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	473.5	474
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.70	5.60
7	Average percentage	%	5.65	

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Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : CP-RW-2023-05-25-01 Date: 26-05-23

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	30	30	6.3	93.7	90-100
9.5	65	95	20.1	79.9	70-88
4.75	105	200	42.2	57.8	53-71
2.36	50	250	52.8	47.2	42-58
1.18	41	291	61.5	38.5	34-48
0.6	35	326	68.8	31.2	26-38
0.3	39	365	77.1	22.9	18-28
0.15	30	395	83.4	16.6	12-20
0.075	42	437	92.3	7.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	33	33	7.0	93.0	90-100
9.5	86	119	25.1	74.9	70-88
4.75	96	215	45.4	54.6	53-71
2.36	54	269	56.8	43.2	42-58
1.18	29	298	62.9	37.1	34-48
0.6	43	341	71.9	28.1	26-38
0.3	38	379	80.0	20.0	18-28
0.15	30	409	86.3	13.7	12-20
0.075	24	433	91.4	8.6	4-10

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-05-25-01** **Date: 26-05-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 25-05-23

Type of Mix : Tack coat

Date of test : 25-05-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.8	0.769
5	Weight of tack Coat (d=c-b)	Kg	0.02	0.021
6	Rate of spread of tack coat	Kg/sq.m	0.222	0.233
7	Average	Kg/sq.m	0.228	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

CIVIL Pro Sig..... Date..... BANGALORE

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Authorized Signatory
Quality Manager

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End of Report

AEE (VRP) SD

TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 17-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	WMM (Wet Mix Macadam)	
Source of Sample	:	Nanjappa Layout	
Date of test	:	15-11-23	
Oven Dry Weight	:	11000 Grams	

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	198	198	1.8	98.2	95-100
22.4	2412	2610	23.7	76.3	60-80
11.2	2365	4975	45.2	54.8	40-60
4.75	1765	6740	61.3	38.7	25-40
2.36	1455	8195	74.5	25.5	15-30
0.6	1658	9853	89.6	10.4	8-22
0.075	798	10651	96.8	3.2	0-5

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 17-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Nanjappa Layout	
Date of test	:	15-11-23	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	302.7	302.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	77.5	74.1
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	224.8	227.5
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.9
5	Aggregate impact value	(B/A)*100	25.6	24.5
6	Aggregate impact value (Mean of two tests)	Pecentage	25.0	

* The results obtained are satisfactory as per standard requirements.

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 17-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Source of Sample	:	Nanjappa Layout	
Date of test	:	15-11-23	

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.4%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.8%	
Combined Flakiness and Elongation Index for WMM	25.2%	

* The results obtained are satisfactory as per standard requirements.

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Format No: CP/TF/01

TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 17-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer's Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Sample Type	:	Bitumen	
Reference to BIS codes	:	IS: 1201-2021, IS: 1202-1220(1978) (Reaffirmed-2019)	
Date of test	:	15-11-23	

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**60**	Min 45
2	Softening Point, °C	**52.4**	Min. 47°C
3	Ductility, cm	**100**	Min. 47 cm
4	Flash point, °C	**313**	Min. 220°C
	Fire point, °C	**324**	

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2023-11-15-01** **Date: 19-11-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 15-11-23

Type of Mix : DBM-Plant (Dense Bituminous Macadam)

Date of test : 15-11-23

Weight of Sample : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-10 (grading -2)
37.5	0	0	0	100	100
26.5	252	252	5.04	94.96	90-100
19	353	605	12.10	87.90	71-95
13.2	455	1060	21.20	78.80	56-80
4.75	1752	2812	56.24	43.76	38-54
2.36	405	3217	64.34	35.66	28-42
0.3	1340	4557	91.14	8.86	7-21
0.075	210	4767	95.34	4.66	2-8
PAN	233	5000	0.00	0	0

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 19-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Date of test	:	15-11-23	

Table 500-6 : Physical Requirements fo Coarse Aggregate for Dense Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	11.2	Combined Flakiness & Elongation Index for DBM is Maximum 35%	IS:2386 Part I
	Elongation Index	10.4		
Strength	Aggregate Impact Value	19.0	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.58	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.38	Maximum 2%	IS:2386 Part III

The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 19-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	DBM (Dense Bituminous Mecadam)	
Date of test	:	15-11-23	

The results of the tests conducted on the Dense Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 19-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	DBM(Dense Bitumnous Macadam)	
Date of test	:	15-11-23	

Type of Binder	:	60/70
% of Binder Used	:	4.5%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	9 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : **CP-RW-2023-11-15-01** **Date: 17-11-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 15-11-23

Type of Mix : BC-Plant (Bituminous Concrete)

Date of test : 15-11-23

Oven Dry Weight : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2023-11-15-01**	**Date: 18-11-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	15-11-23	
Type of Mix	:	BC(Bitumenous Concrete)	
Date of test	:	15-11-23	

Type of Binder	:	60/70
% of Binder Used	:	5.4%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.8 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID : **CP-RW-2023-11-15-01** **Date: 18-11-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 15-11-23

Type of Mix : BC (Bituminous Concrete)

Date of test : 15-11-23

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID : **CP-RW-2023-11-15-01** **Date: 18-11-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 15-11-23

Type of Mix : BC (Bituminous Concrete)

Date of test : 15-11-23

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-12-22-01**	**Date: 23-12-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	22-12-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	12th cross road Nanjappa Layout	
Date of test	:	22-12-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	479
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1} \times 100$	4.50	4.60
7	Average percentage	%	4.55	

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Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	30	30	6.26	93.7	90-100
19	48	78	16.27	83.7	71-95
13.2	105	183	38.16	61.8	56-80
4.75	70	253	52.76	47.2	38-54
2.36	42	295	61.52	38.5	28-42
0.3	98	393	81.96	18.0	7-21
0.075	72	465	96.98	3.0	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 479

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	31	31	6.47	93.5	90-100
19	52	83	17.33	82.7	71-95
13.2	98	181	37.79	62.2	56-80
4.75	88	269	56.16	43.8	38-54
2.36	62	331	69.10	30.9	28-42
0.3	70	401	83.72	16.3	7-21
0.075	50	451	94.15	5.8	2-8

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2023-12-22-01**	**Date: 23-12-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	22-12-23	
Type of Mix	:	DBM (Dense Bituminous Macadam)	
Source of Sample	:	11th cross road Nanjappa Layout	
Date of test	:	22-12-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	479.5	478.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	4.50	4.70
7	Average percentage	%	4.60	

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Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

AFTER EXTRACTION(Trail-1)

Weight of Sample(gm) : 479.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH
37.5	0	0	0	100.0	100
26.5	34	34	7.09	92.9	90-100
19	46	80	16.68	83.3	71-95
13.2	108	188	39.21	60.8	56-80
4.75	69	257	53.60	46.4	38-54
2.36	46	303	63.19	36.8	28-42
0.3	95	398	83.00	17.0	7-21
0.075	60	458	95.52	4.5	2-8

AFTER EXTRACTION(Trail-2)

Weight of Sample(gm) : 478.5

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Specification Limits as per MORTH specification
37.5	0	0	0	100.0	100
26.5	24	24	5.02	95.0	90-100
19	60	84	17.55	82.4	71-95
13.2	94	178	37.20	62.8	56-80
4.75	90	268	56.01	44.0	38-54
2.36	65	333	69.59	30.4	28-42
0.3	60	393	82.13	17.9	7-21
0.075	55	448	93.63	6.4	2-8

* The results obtained are satisfactory as per standard requirements.

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-12-22-01**	**Date: 23-12-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	22-12-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	10th cross road Nanjappa Layout	
Date of test	:	22-12-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	474.5	473.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.50	5.70
7	Average percentage	%	5.60	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

AEE (VRP) SD

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 474.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	35	35	7.4	92.6	90-100
9.5	70	105	22.1	77.9	70-88
4.75	108	213	44.9	55.1	53-71
2.36	50	263	55.4	44.6	42-58
1.18	43	306	64.5	35.5	34-48
0.6	31	337	71.0	29.0	26-38
0.3	40	377	79.5	20.5	18-28
0.15	28	405	85.4	14.6	12-20
0.075	44	449	94.6	5.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 473.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	27	27	5.7	94.3	90-100
9.5	90	117	24.7	75.3	70-88
4.75	86	203	42.9	57.1	53-71
2.36	60	263	55.5	44.5	42-58
1.18	34	297	62.7	37.3	34-48
0.6	41	338	71.4	28.6	26-38
0.3	39	377	79.6	20.4	18-28
0.15	34	411	86.8	13.2	12-20
0.075	40	451	95.2	4.8	4-10

* The results obtained are satisfactory as per standard requirements.

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Authorized Signatory
Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 22-12-23

Type of Mix : Tack coat

Date of test : 22-12-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.805	0.772
5	Weight of tack Coat (d=c-b)	Kg	0.025	0.024
6	Rate of spread of tack coat	Kg/sq.m	0.278	0.267
7	Average	Kg/sq.m	0.272	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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End of Report

AEE (VRP) SD

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	**CP-RW-2023-12-22-01**	**Date: 23-12-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	22-12-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	2nd cross road Nanjappa Layout	
Date of test	:	22-12-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	473	473.5
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.80	5.70
7	Average percentage	%	5.75	

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AEE (VRP) SD

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 473

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	29	29	6.1	93.9	90-100
9.5	60	89	18.8	81.2	70-88
4.75	112	201	42.5	57.5	53-71
2.36	49	250	52.9	47.1	42-58
1.18	50	300	63.4	36.6	34-48
0.6	35	335	70.8	29.2	26-38
0.3	48	383	81.0	19.0	18-28
0.15	20	403	85.2	14.8	12-20
0.075	43	446	94.3	5.7	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 473.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	36	36	7.6	92.4	90-100
9.5	88	124	26.2	73.8	70-88
4.75	76	200	42.2	57.8	53-71
2.36	57	257	54.3	45.7	42-58
1.18	40	297	62.7	37.3	34-48
0.6	39	336	71.0	29.0	26-38
0.3	40	376	79.4	20.6	18-28
0.15	30	406	85.7	14.3	12-20
0.075	38	444	93.8	6.2	4-10

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

End of Report

AEE (VRP) SD

DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 22-12-23

Type of Mix : Tack coat

Date of test : 22-12-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.802	0.77
5	Weight of tack Coat (d=c-b)	Kg	0.022	0.022
6	Rate of spread of tack coat	Kg/sq.m	0.244	0.244
7	Average	Kg/sq.m	0.244	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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End of Report

AEE (VRP) SD

TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID	:	CP-RW-2023-12-22-01	**Date: 23-12-23**
Project Name	:	Package No-03 (Consists of 5 works)	
Agency	:	M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097	
Customer Reference	:	BBMP/EE/BTP/WO/78/2022-23	
Date of Receipt	:	22-12-23	
Type of Mix	:	BC (Bituminous Concrete)	
Source of Sample	:	1st cross road Nanjappa Layout	
Date of test	:	22-12-23	

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	W1	500	500
2	Weight of the sample After extraction	W2	475	474
3	Initial weight of Paper	W3	4	4
4	Final weight of Paper	W4	6	6
5	Increase in weight of Filter Paper	W5=W4-W3	2	2
6	Bitumen percentage	$\frac{W1-W2+W5}{W1}$ X 100	5.40	5.60
7	Average percentage	%	5.50	

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AEE (VRP) SD

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 475

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	34	34	7.2	92.8	90-100
9.5	66	100	21.1	78.9	70-88
4.75	104	204	42.9	57.1	53-71
2.36	50	254	53.5	46.5	42-58
1.18	48	302	63.6	36.4	34-48
0.6	38	340	71.6	28.4	26-38
0.3	34	374	78.7	21.3	18-28
0.15	25	399	84.0	16.0	12-20
0.075	40	439	92.4	7.6	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 474

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	33	33	7.0	93.0	90-100
9.5	84	117	24.7	75.3	70-88
4.75	80	197	41.6	58.4	53-71
2.36	60	257	54.2	45.8	42-58
1.18	48	305	64.3	35.7	34-48
0.6	34	339	71.5	28.5	26-38
0.3	37	376	79.3	20.7	18-28
0.15	33	409	86.3	13.7	12-20
0.075	43	452	95.4	4.6	4-10

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID : **CP-RW-2023-12-22-01** **Date: 23-12-23**

Project Name : Package No-03 (Consists of 5 works)

Agency : M/s Karthik Enterprises, No.123, Aishwarya, 3rd Cross, Ramanna Garden, Vidyaranyapura, Bengaluru-560097

Customer Reference : BBMP/EE/BTP/WO/78/2022-23

Date of Receipt : 22-12-23

Type of Mix : Tack coat

Date of test : 22-12-23

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.748
4	Final weight of plate after application of tack Coat (c)	Kg	0.801	0.768
5	Weight of tack Coat (d=c-b)	Kg	0.021	0.02
6	Rate of spread of tack coat	Kg/sq.m	0.233	0.222
7	Average	Kg/sq.m	0.228	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

* The results obtained are satisfactory as per standard requirements.

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